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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,235	03/10/2004	Ta-Ko Chuang	B-4442CIP 621763-9	3558
7590 Richard P. Berg, Esq. c/o LADAS & PARRY Suite 2100 5670 Wilshire Boulevard Los Angeles, CA 90036-5679			EXAMINER AFTERGUT, JEFF H	
			ART UNIT 1733	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			01/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/798,235

Applicant(s)

CHUANG ET AL.

Examiner

Jeff H. Aftergut

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1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Choo et al (US 6,297,869) or alternatively Choo et al (US 6,297,869) in view of the admitted prior art for the same reasons as expressed in paragraph 2 of the Office action dated August 17, 2006 further taken with either one of Hafner or Boddicker.

The references as set forth above to Choo et al '869 and the admitted prior art are applied for the same reasons as expressed in paragraph 2 of the Office action dated 8-17-06. The reference to Choo et al '869 failed to expressly state that one skilled in the art would have cut the glass and metal materials therein via a melting of the material. It is clear that the cut was at least in part achieved via a mechanical stress induced upon the article by application of high heat followed by immediate cool down. The reference failed to teach that the heating was sufficient to melt the glass material therein with the laser.

Hafner expressly stated that there were two alternative ways to cut glass with a laser which included the use of cracking via heating followed by immediate cooling to crack the glass or the use of a laser beam where the beam intensity was adjusted or the movement between the beam and glass were adjusted to ensure that the glass was melted thereby facilitating severing of the glass. Applicant is more specifically referred to column 2, lines 41-54 of the reference. The reference made it clear that as an

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alternative to utilizing mechanical stress to achieve the cut in the glass with a laser one skilled in the art would have been well aware that the use of melting was an alternative to the same. Where, as here, two equivalents are interchangeable for their desired function, an express suggestion of the desirability of the substitution of one for the other is not needed to render such substitution obvious, see In re Fout, 213 USPQ 532, In re Siebentritt, 152 USPQ 618. It would have been obvious to one of ordinary skill in the art at the time the invention was made to melt the glass and metal materials of the admitted prior art with a lasers operated at differing wavelengths in order to facilitate cutting of the materials as the reference to Hafner suggested such was an art recognized alternative to cutting with a laser as a function of mechanical stresses as appears was performed by Choo et al '869 in the process of making the assembly in accordance with the admitted prior art.

Boddicker suggested that it was known to cut glass materials which included tempered glass with a laser wherein the laser melted the glass material followed by immediate cool down of the glass in order to retain the temper of the glass after the cutting operation in the region where the cut took place, see column 1, lines 63-67, column 2, lines 15-22. As it was recognized that tempered glass was in general stronger than non-tempered glass, it would have been understood that in the operation of Choo et al '869 that it was desirable to employ tempered glass therein. Additionally, note that Choo et al clearly cooled the glass subsequent to the heating operation; Boddicker being cited to evidence that such heating certainly would have included the melting of the glass therein. It would have been obvious to one of ordinary skill in the art at the

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time the invention was made to employ the techniques of Choo et al '869 wherein the glass material was clearly melted in the laser cutting operation followed by cooling the same in order to ensure that the tempering of the glass was retained (note that one skilled in the art would have desired to employ a tempered glass material as such was art recognized as a stronger glass material) as taught by Boddicker in the process of making a laminated assembly of the admitted prior art.

Response to Arguments

3. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

The applicant essentially argues that the prior art of record failed to teach the melting of the glass and metal layers to facilitate the cutting of the assembly therein and evidenced that Choo et al '869 appears to only suggest that one employ a means of cutting which was a function of the use of a cool down immediately following the heating with the laser and that there is no indication the heating was to the point of melting the glass material. The applicant is advised that the reference does not expressly state that the heating was to a point less than the melting point in the processing employed to cut the glass therein. Nonetheless, the reference to Hafner is cited herein to evidence that those skilled in the art would have clearly understood that rather than employing thermal stressing to break the glass one skilled in the art would have understood that melting with a laser was an art recognized alternative which one skilled in the art would have known how to perform instead of heating followed by immediate cooling of the glass. Applicant's arguments are therefore respectfully traversed.

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Note additionally that Boddicker evidenced that one skilled in the art even utilizing the thermal stress to crack the glass would have heated the glass above the melting point of the glass in the cutting operation followed by immediate cool down in order to retain the temper of the glass.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Jeff H. Aftergut
Primary Examiner
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JHA
January 3, 2007